DOCUMENT RESUME

ED 247 018 PS 014 485

AUTHOR Partridge, Susan
TITLE Left/Right Brain Functioning: Implications for Teachers.
PUB DATE [83]
NOTE 14p.
PUB TYPE Guides - Non-Classroom Use (055) -- Information Analyses (070)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Behavior; *Cerebral Dominance; *Cognitive Style; Elementary Secondary Education; Guidelines; *Lateral Dominance; Learning Modalities; *Multisensory Learning; Teaching Methods

ABSTRACT

To increase teachers' sensitivity to their students' learning styles, this paper points out some behavioral characteristics displayed by many right-hemispheric children. Additionally, the distinction between children who are either "part perceivers" or "whole perceivers" is explained. Functions of brain parts as well as several remedial, multisensory approaches designed to help the severely disabled reader are briefly described, and suggestions are offered for teaching children having weak language skills and favoring the visual learning modality. In conclusion, some ways that teachers can effectively instruct children with different hemispheric preferences are indicated. (RH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED247018

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Left/Right Brain Functioning: Implications for Teachers

Abstract

This paper is addressed to the importance of teaching to both hemispheres of the brain, for it is believed that the children who use both hemispheres cooperatively achieve greater academic success and seem to fare better socially. It includes reviews of published successes of noted educators who have tried to interpret brain research in terms of what it means in the classroom. They have offered a number of suggestions for teaching the right-brained who, apparently, have been neglected, but they have been careful not to forget the left-brained in so doing. The contents are interspersed with appropriate and/or supportive remarks by the author-- remarks based upon decades of educational experience.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Susan Partridge
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

PS 014485

Left/Right Brain Functioning:
Implications for Teachers

It was decades ago that Dr. Samuel Orton proposed his theory of cerebral dominance. Dr. Orton's claim was that the non-dominant hemisphere posed a mirror image of the visual images of the dominant hemisphere. Though there has been little support of Orton's theory, his suggestion of a genetic basis for reading difficulty has prompted researchers to continue their efforts in this area.

Though years have passed, the reading problems of an entire family remain crystal clear. All members were intelligent; all were physically attractive; each was pleasant and cooperative; and they were all talented. Both parents, successful and respected citizens, who admitted having had a similar problem, were most cooperative with school personnel and very understanding of their children's problems. The result was that each child had a good self-concept, and each became a productive and caring citizen.

Rather recently, numerous articles dealing with hemispheric dominance and its implications for teaching have been found not only in professional journals of particular interest to educators but also in magazines such as the Ladies Home Journal, Science, and U.S.A. Today -- all readily available to the general public. (For examples, note references 11, 10 & 8). This is

fortunate because parents are partners in the education of their children. If the articles stimulate thinking and questioning, they have served a purpose.

It is generally conceded that our schools have adhered (and still do) to a left-hemispheric approach. For example, phonics continues to be an important part of the first grade reading curriculum, and, of course, it is based on part-to-whole, and, therefore, is said to favor the child with the dominant left hemisphere. The whole-to-part approach is said to be that of the dominantly "right-brained" child. This implies that phonics may, or may not, be the right approach for him/her.

The case of little John comes to mind. When asked why he was crying, John replied, "It's them there valves that gets me. I never know if it's 'get' or 'got'." An astute reading consultant remembered that John knew the word, pet, so she wrote "get" under "pet" and then wrote "got" under "pet." She asked John which word, get or got, looked and sounded the most like "pet". The whole word seemed to mean more to John than its parts, and he no longer confused the two words.

John was extremely good at drawing, and could picture an entire story such as a fishing trip with his father. In speaking with him, it would be hard to believe that his standardized reading test scores could be so low.

Barbara Vitale (12) has offered a list of twenty-six observable behavioral characteristics displayed by many right-hemispheric children. She warns that not all will display all

of the characteristics and that the children who are laterally balanced will, of course, display both right and left hemispheric characteristics. Many of these characteristics will be recognized by teachers. A random sampling follows; the complete list is available in the above reference.

1. Appears to daydream.
2. May have difficulty in phonics or decoding skills.
3. Often has a messy desk.
4. Is able to recall places and events but has difficulty in recalling symbolic representations such as names, letters, and numbers.
5. Likes to take things apart and put them back together again.
6. May be a leader in the class.

In addition, Mrs. Vitale offers detailed screening devices as well as learning strategies -- all right-brained in their approach, as she feels that there are already enough left-hemispheric approaches in the school curriculum. The use of color, movement, imagery, sound and touch are found throughout the strategies offered, and holistic strengths are considered.

It is felt that this sharing, by an educator, of strategies she has found successful will be appreciated by teachers, for it is they who are faced with teaching each child assigned to them. Her advice to discard a strategy if it isn't working is good advice, for all too often it has been observed that the

child having extreme difficulty in learning was given "more of the same" even when receiving what was called "remedial help."

Lerner (9), too, called attention to the children with holistic strengths when she reminded us of the work of Goins (1958) who found that some learners are "whole perceivers" and some are "part perceivers." It is quite obvious that the ability to use both part and whole is required of the effective learner. For example, a lengthy word might be remembered from its total configuration, but to distinguish between "get" and "got", noting detail can be important.

Lerner also reminded us that a "part learner's" picture of a shirt might be colored in several different colors -- the right sleeve one color, the left sleeve another, and the body of the shirt still another.

Throughout decades of personal educational experience, the use of many techniques, approaches, methods -- call them what you will -- designed to help the severely-disabled reader, have been published. Throughout the years, witness has been borne to their use, some of it successful, some not. Several are remembered:

Gearheart (5) reminds us that Anna Gillingham, who worked with Dr. Orton at the Neurological Institute, Columbia-Presbyterian Medical Center in New York (1930's), and who was supervised by Dr. Orton, "developed and published the Orton-Gillingham method in a form that was of immediate practical application in the classroom." For a number of years, Gillingham collaborated

with Stillman (6) in writing and publishing. Lerner offers a detailed description of the Gillingham-Stillman method. Her verbatim account follows:

> The Gillingham-Stillman method is an outgrowth of the Orton theory of reading disability. The Gillingham-Stillman method is a highly structured approach requiring five lessons a week for a minimum of two years. The initial activities are concerned with the learning of individual letter sounds and blending. The child uses a tracing technique to learn single letters and their sound equivalents. These single sounds are later blended into larger groupings and then blended into short words. Simultaneous spelling tasks are also part of this technique; while writing the letters, the child says both the scunds of the letters in sequence and the letter names. The method emphasizes phonics and a highly structured sequence of learning. Independent reading is delayed until the major part of the phonics program has been covered.

Another well-known multi-sensory approach is that of Grace Fernald (4) whose successful work with disabled readers for more than twenty years was brought to wide public notice with the publication of her book, Remedial Techniques in Basic School Subjects in 1943. Fernald's method differed from the Gillingham-Stillman approach in several respects. The child was asked to volunteer a word that he/she would like to learn, and this might be considered a "plus" for motivation. The instructor would write the word, and the child would finger trace it until he thought he could reproduce it from memory.

Cruickshank, Morse, and Johns (2) cite a very touching story of a thirteen-year-old boy who was asked for a word. The word he volunteered seemed unintelligible to the instructor who then requested help. The word was his last name, fifteen letters in length. When the boy was congratulated for his successful performance, tears were said to trickle down his face. What an accomplishment! A name is a person's identity, and, as he/she goes through life, the need to sign it is often required.

Now, Blau and Loveless (1) have suggested a different sequence in a multi-sensory approach in teaching reading and spelling. They suggest TAK(v) as opposed to VAKT. An explanation follows:

The authors state, "From 1968 on, the acceptance of the theory that the visual modality was a matter of concern and that the tactile modality had been underestimated was relatively rapid," and they offer several references in this regard. They suggest substituting the tactile modality for the visual modality in the initial stages of remediation, and the use of one hand for the tactile scanning of three-dimensional letters to access the right hemisphere.

Though they report some experimental data indicating success, Blau and Loveless graciously call their results exploratory rather than definitive because of their small sample size.

In using the VAKT technique, Deady (3) has found some "right handers who learn only when taught by left handed

tactile methods." She has found, too, that adding texture with a crayon and screen reduces the number of tracings needed to learn a word.

Visual perceptual and visual motor training programs seemed to be "in vogue" over a period of several years (1960's) and a number of these were witnessed, but the success didn't seem to be sensational. One serious fallacy, witnessed over and over again throughout decades has been the fallacy of having a program given to everybody; this often meant that a number of children were bored, and that the ones who might have profited by the program, especially with individual help from the instructor, were more or less neglected. All this might help to explain why various programs failed to "gain ground."

Hallahan and Kauffman (7), aware of the controversy over the effectiveness of visual-perceptual and visual-motor training programs, seem to feel that the burden of proof rests on the advocates of this training as a means of helping the learning disabled.

It is granted that there are some who have profited (probably still do) by each program named or alluded to in this paper, but it can not be too strongly emphasized that public education's seeming obsession with uniformity must be overcome if quality education is to prevail.

More and more is being learned about the intricacies and wonders of the brain. Some have likened our present knowledge about it to our knowledge about space, and they have added that,

though we don't know all, we can use what we know to learn more. Gertrude Webb (13) has offered a number of conclusions which we may safely draw, several of which follow:

> 1. That the hindbrain, monitor of attention, and the midbrain, monitor of emotion, both evolutionary antecedents of the forebrain, continue to affect daily behavior. They must be recognized as critical participants in effective versus noneffective learning.
>
> 2. That the forebrain has two hemispheres that are not equal in function.
>
> 3. That neither left nor right hemisphere is better or less able than the other. Rather, they differ in function.
>
> 4. That in over 90% of the right-handed "normal" population, the left hemisphere is superior in language and in sequential, symbolic and analytical, logical reasoning; the right hemisphere is superior in visuo-spatial, non-verbal, synthetic reasoning.
>
> 5. That the right hemisphere does perform some language tasks at concrete levels (e.g., naming nouns and verbs), while the left hemisphere performs some concrete visuo-spatial tasks.

Webb questions, "Does it not make sense that the right and left hemispheres work cooperatively to create a fully rounded view of the world?" She quotes Duffy, "Man is bilaterial, so is his body designed, two legs, two arms, two hemispheres." (Duffy, 1981). She advises teachers thus: "Let us as teachers help our students develop competence through an understanding of the need for the brains to work together," and she offers a number of teaching suggestions for each hemisphere.

The rather recent emphasis on the need for respecting right brain competencies in our teaching might result in having the pendulum swing in the other direction, but Webb warns:

> "Lest we forget our left-brained learners who may do very well academically because of their language superiority, but who may be deficient in visual-spatial skills, encourage them to draw images of what they are discussing, to doodle, to follow maps, to give directions, to respect and develop the right sides of their brains. Moving into a world of graphics and computers, such skills may prove critical in the real world of the 1990's."

For those whose language skills are weak but whose favored learning modality is found to be visual, she shares her suggestions, some in considerable detail. Not surprisingly, she begins with, "Respect right brain competencies." A number of her other suggestions, some of which have been shortened for the sake of brevity, follow:

> Approve the visual way of learning.
>
> Set up visual tasks as an introduction to a problem.
>
> Allow such students to express their ideas visually.
>
> Encourage the learner to talk, to listen, and to ask questions.
>
> To build written language skills, use a visual base.

There are a number of assessment tools for determining individual preferred learning styles. Webb mentions the Murphy-Talabach "Look-See-Do" model (Murphy and Talabach, 1980). These tools can be used when the preferred learning style isn't readily observable. It is again reminded that hemispheric team work is the ultimate goal.

Conclusion

At this point, as more research on the functions of the brain is awaited, it is concluded that our teaching activities should be addressed to both the left and right hemispheres of the brain, as it is generally concluded that the children who use both hemispheres cooperatively achieve greater academic success and seem to fare better socially.

Implications for Teachers

1. Address teaching to both hemispheres of the brain.
2. If a child has a strong hemispheric preference, as determined by testing or through observation, introduce teaching activities in that mode, but later direct them to the other hemisphere for its appropriate development, as team work is essential for optimum performance.
3. Involve parents; help them to understand their children's learning styles.

4. Follow the brain research done by the medical people and try to interpret it in terms of what it means in the classroom.

5. Share your successes with teachers, for it is they, not the medical people, who are concerned with the actual teaching of children.

6. Individualize your instruction to the greatest extent possible, for, as Vitale puts it, "Brain patterns are as individual as fingerprints."

Bibliography

1. Blau, H. and Loveless, E.J. "If They Can Speak, Why Can't They Read? And Spell? They May Now." Reading (UKRA periodical), April 1983.

2. Cruickshank, W.M., Morse, W.C. and Johns, J.S. Learning Disabilities. New York: Syracuse University Press, 1980.

3. Deady, C. "Nothing Works? Try Screen VAKT." Academic Therapy, March 1984.

4. Fernald, G.M. Remedial Techniques in Basic School Subjects. New York: McGraw-Hill, 1943.

5. Gearheart, B.R. Learning Disabilities. Missouri: The C.V. Mosby Company, 1973.

6. Gillingham, A. and Stillman, B.W. Remedial Work for Reading, Spelling, and Penmanship (Revised and Enlarged). New York: Sackett and Wilhelms Lithographing Corporation, 1936.

7. Hallahan, D.P. and Kauffman, J.M. Introduction to Learning Disabilities: A Psycho-Behavioral Approach. New Jersey: Prentice-Hall, 1976.

8. LaTorre, R.A. "Training the Brain." U.S.A. Today, March, 1982.

9. Lerner, J.W. Children With Learning Disabilities. Massachusetts: Houghton Mifflin, 1971.

10. Marx, J.L. "The 2 Sides of the Brain." Science, April 29, 1983.

11. Rubin, N. and Duncan, L. "Wen Smart Kids Cant Lern." Ladies Home Journal, Feb. 1984.

12. Vitale, B.M. Unicorns are Real: A Right-Brained Approach to Learning. California: Jalmar Press, 1982.

13. Webb, G.M. "Left/Right Brains, Teammates in Learning." Exceptional Children, April 1983.